



Audit

Report



AIR FORCE CONTRACT FOR INSTALLATION
OF RADIOS AND ANTENNAE

Report No. D-2000-129

May 22, 2000

Office of the Inspector General
Department of Defense

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Acronyms

4C	Command, Control and Communications Corporation
AWACS	Airborne Warning and Control System
CFA	Communications Functional Area
FAR	Federal Acquisition Regulation
ICCE	Iceland Command and Control Enhancement
IOC	Initial Operational Capability
PDFA	Processing and Display Functional Area



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2885

May 22, 2000

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on Air Force Contract for Installation of Radios and
Antennae (Report No. D-2000-129)

We are providing this report for your information and use. We conducted the audit in response to a congressional request. Because this report contains no recommendations, no written comments were required, and none were received. Therefore, we are publishing this report in final form.

We appreciate the courtesies extended to the audit staff. For additional information on this report, please contact Mr. Terry L. McKinney at (703) 604-9288 (DSN 664-9288) (tmckinney@dodig.osd.mil) or Mr. Bruce A. Burton at (703) 604-9282 (DSN 664-9282) (bburton@dodig.osd.mil). See Appendix B for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Lieberman", is positioned above the typed name.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. D-2000-129

(Project No. D2000CF-0062)

(formerly Project No. OCF-2106)

May 22, 2000

Air Force Contract for Installation of Radios and Antennae

Executive Summary

Introduction. In September 1999, the Senate Committee on Small Business requested we review the actions taken by the Air Force regarding a contract awarded to Techdyn Systems, a small disadvantaged business. Specifically, the Committee requested that we determine the propriety of the Air Force direction in a prime contract, that the prime contractor subcontract a portion of its work to a specifically named subcontractor. In addition, the Committee requested that we review the propriety of the Air Force's insistence that the prime contractor continue to work with that specific subcontractor, even when notified that the subcontractor was not performing.

The contract was awarded in April 1985 with expected costs of \$12.1 million and a performance period of 18 months. However, the contract was not completed until 1993 at a final cost of \$18 million. After the contract was completed, the Air Force and Techdyn Systems have disagreed about the final costs. The contract has not been closed out because Techdyn Systems developed a claim for \$6.7 million against the Air Force. The Iceland Command and Control Enhancement program was to provide an interim near-term secure voice and digital link between the E-3 aircraft and the ground operation center in Iceland. Work for this program was to be completed by Techdyn Systems and Command Control and Communications Corporation, the directed subcontractor, in two phases consisting of two functional areas. Techdyn Systems, the prime contractor, was performing the communications functional area and program management. Command, Control and Communications Corporation was used to obtain all hardware, software and related documentation for the processing and display functional area.

Objectives. Our objective was to determine whether the actions taken by the Air Force in the award and administration of the contract complied with applicable statutes, regulations, directives and good acquisition practices.

Results. The Air Force could legally require the section 8(a) prime contractor to use a specific subcontractor because the Air Force made the decision that a part of the overall system had to be the same form, fit and function as previously developed by the subcontractor.

There was no evidence that the Air Force directed Techdyn Systems to continue using the subcontractor without considering other alternatives but rather that the Air Force instructed the prime contractor to address the subcontractor performance problems. Legal precedence supports the Air Force's instruction.

While the Air Force legally could support the decision, questionable business decisions were made throughout the procurement of the program. The Air Force did not adequately assess the prime contractor or subcontractor capabilities before awarding the contract. In addition, the Air Force used the small disadvantaged business set-aside program to award the contract to avoid perceived problems with competition requirements. The Air Force also lacked an aggressive approach to keep the contract on schedule and meet deliverable milestones. As a result, the Air Force received an incomplete and late product at a cost that was \$6 million greater than planned. For details of the audit results, see the Finding's section of the report.

Summary of Recommendations. We did not make recommendations because laws were enacted after this contract was awarded that required competition of contracts under the small disadvantaged set-aside program for contracts exceeding \$3 million. In addition, the DoD is now required to consider past performance prior to awarding contracts.

Management Comments. We provided a draft of this report on March 27, 2000. Because this report contains no recommendations, written comments were not required, and none were received. Therefore, we are publishing this report in final form.

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Introduction

The audit was performed in response to a Congressional request. In September 1999, the Committee on Small Business requested that we review Air Force actions regarding a contract that was awarded to Techdyn Systems. Specifically, the Committee requested that we determine the propriety of the Air Force direction in a prime contract, that the prime contractor subcontract a portion of its work to a specifically named subcontractor. In addition, the Committee requested that we review the propriety of the Air Force's insistence that the prime contractor continue working with that subcontractor, even when notified that the subcontractor was not performing.

Background

Contract F19628-85-C-0079 was an Air Force contract for the Iceland Command and Control Enhancement (ICCE) program acquisition. The ICCE program was to provide an interim near-term secure voice and digital link between the E-3 Airborne Warning And Control System (AWACS) and the ground operation center in Iceland. The \$939,251 contract was awarded to Techdyn Systems on April 2, 1985, under the small disadvantaged business set-a-side 8(a) program. However, only a small part of work, the initial operational capability (IOC), and a tasking to develop the proposal for remaining work was priced at the time the contract was awarded. The work was to be completed in two phases, an initial phase consisting of a single system and the final phase consisting of four systems. The two functional areas of the system were a communications functional area (CFA) and the processing and display functional area (PDFA).

Operational Capability Phases. The first phase was the IOC. This phase was to be completed by September 1985 and was the main reason for having a contract in place by April. The IOC consisted of one display and communication system in place at one site. The second phase (final operational capability) consisted of four additional systems at four sites. The cost of the second phase was to be negotiated between the Air Force and Techdyn Systems after the contract was awarded.

Functional Areas. The work performed under the contract consisted of the CFA and the PDFA. Techdyn Systems, the prime contractor, was responsible for the CFA and program management. Command, Control and Communications Corporation (4C), a government directed subcontractor, was responsible for the PDFA portion.

Directed Subcontractor. The Air Force directed Techdyn Systems to use 4C as the subcontractor for the PDFA portion because 4C had produced five display systems in the past. The Air Force wanted to use the same display system

although software modifications would be necessary to allow the system interface with the entire ICCE system.

Objectives

Our objective was to determine whether the actions taken by the Air Force in the award and administration of the contract complied with applicable statutes, regulations, directives and good acquisition practices.

Procurement for ICCE Program

Although the Air Force decision to direct a prime contractor to use a specific subcontractor was legally supportable, questionable business decisions were made throughout the procurement of the ICCE program. The questionable business decisions occurred because of a lack of acquisition planning and an inflexible acquisition strategy. As a result, the Air Force received an incomplete system that was delayed and cost \$6 million more than planned.

Directed Subcontracts

The Air Force could legally require the Section 8(a) prime contractor to use a specific subcontractor. Because the Air Force made the decision that the PDFA had to be the same form, fit and function as the system previously developed by 4C, the Air Force had a valid legal basis and practical reasons for insisting on 4C as a major subcontractor. Techdyn Systems could not provide any documentation, and we could not find any evidence that the Air Force directed Techdyn Systems to continue to use the subcontractor without considering other alternatives. The Air Force instructed the prime contractor that subcontractor performance problems should be addressed with the subcontractor.

Prime contractors are responsible for suppliers and subcontractors performance on their contracts. There is considerable case law that applies this principle to contracts that require the use of a specific subcontractor, supplier, or component. The prime contractor must ensure that all required work is performed and is not relieved of responsibility when subcontracting part of the work. The government does not assume the business risks of a prime contractor. The prime contractor enters into a contract knowing of the directed subcontract, and by executing the contract, agrees to all of its conditions. The directed subcontract does not relieve a contractor from determining, for example, whether a subcontractor is capable of performing requirements within the specifications and deadlines of the contract. A considerable body of cases provides that should a subcontractor's performance be deficient, the contractor's remedy is against the subcontractor, not the government. The contractor should prepare subcontracts to include necessary measures of protection. In fact, Techdyn Systems successfully prosecuted a civil lawsuit against 4C and received a sizable award because of delays 4C caused in the overall performance of the contract. The delays were also caused not only by technical 4C performance problems, but also by reorganizations subsequent to its acquisition by Whittaker Command and Control Systems.

Procurement Decisions

The Air Force made questionable business decisions throughout the procurement of the ICCE program that included:

- deciding to use the small business set-aside program to obtain the services of the subcontractor because the Air Force was worried that a sole-source procurement would take too much time and might not be approved,
- selecting the prime contractor and the subcontractor without adequately assessing their capabilities, and
- lacking an aggressive approach to achieve progress in light of missed deliverable milestones.

Small Business Set-Aside Program. The Air Force considered competing the contract, and in October 1984, 12 small businesses responded to a "Sources Sought Synopsis" in the Commerce Business Daily for the ICCE program. However, those offerors were not evaluated because the Air Force decided to use the same form, fit, and function as those procured earlier and manufactured by 4C.

Once the Air Force decided that 4C had to perform the work on the PDFFA portion, the acquisition strategy revolved around acquiring the services of 4C. Since the Air Force personnel that originally participated in the acquisition decisions were no longer available to answer questions, we could not determine why the procurement was not awarded to 4C as the prime contractor on a sole source basis. However, the Air Force did not award the contract to 4C as the prime contractor. Instead, the Air Force considered several other options which limited its evaluation time before awarding the contract to Techdyn Systems. The Air Force then directed Techdyn Systems to use 4C as a subcontractor for the PDFFA portion of the contract. Techdyn Systems had previously operated and installed similar 4C equipment for the Air Force.

Techdyn Systems Capabilities. As the prime contractor, Techdyn Systems was responsible for completing the CFA portion of the work and managing the entire procurement, which included subcontractor work. The Air Force did not fully evaluate Techdyn System's capabilities because of acquisition strategy changes and a compressed award schedule. The Contractor's Performance Evaluation Reports that the Air Force completed on a semiannual basis rated Techdyn System's performance as unacceptable from August 1985 through February 1988 (these were the only reports available for review). The problems related to Techdyn Systems included poor contract management, poor logistics management, and delayed CFA deliverables. Techdyn System's contract performance was substandard to the point that the Air Force program director wrote a letter to the president of Techdyn Systems in May 1986. The letter stated that the Air Force was dismayed at the continuing lack of cohesive management of the project, and the lack of an integrated program schedule.

In addition, the letter stated,

"The review of 15 May was the worst I have seen in 20 years in the Air Force. The presentations were inconsistent and some approached incoherence....Techdyn has yet to prove its ability to manage a moderately complex Air Force program."

At this point, 14 months after contract award, the Air Force was concerned that if Techdyn Systems became financially troubled because of the contract, the Air Force would have to terminate the contract and award a sole-source contract to 4C. Yet, initially when the Air Force decided that awarding the contract to Techdyn Systems was the best approach, it stated the procurement was "particularly well suited to the capabilities of Techdyn Systems."

Terminating the contract with Techdyn Systems, and then awarding a sole-source contract to 4C would not have solved the problem because the majority of the performance problems were attributed to 4C.

4C Performance Capabilities. The 4C performance on the PDFA portion of the contract was poor. When the Air Force decided to use 4C, it stated that the modifications to the existing PDFA would be minimal. However, within 3 months of the contract award, the Air Force acknowledged that it had underestimated the 4C ability to perform. Specifically, the Air Force underestimated to Techdyn Systems the amount of work that was required on the part of 4C to complete the software programming and software documentation related to the PDFA. At times, Techdyn Systems employees were idle, waiting for the software to be complete. Milestones were pushed back throughout the contract period, and 4C continued to miss those milestones as well. Six 4C deliverables were delayed from 4 to 7 years, and the Air Force eventually accepted an incomplete product in 1993.

The delays partly attributable to 4C were caused by a series of acquisitions, reorganizations, and changes in operating locations. In October 1985, 4C merged with Whittaker Corporation and became a wholly owned subsidiary of Whittaker. In August 1987, and July 1988, Whittaker reorganized twice, and eventually became known as Whittaker Electronic Systems. In addition, the operating location and corporate office changed several times. The ICCE program performed by 4C was moved from Torrance, California, to Carlsbad, California. In July 1988, the corporate office was moved to Simi Valley, California.

Deliverable Milestones. Contractor and subcontractor performance on the contract were inadequate because both failed to meet deliverable milestones. Once delays began, the Air Force was not aggressive enough in attempting to keep the contract on schedule and obtain the deliverables.

The Air Force continually rated Techdyn Systems and 4C deficient in the Contract Performance Evaluation Report on a semiannual basis. Both contractors were rated unsatisfactory in the same areas over multiple periods. The Air Force did not pressure the contractors to deliver a suitable product on

time. Instead, the Air Force wrote letters to the contractors stating that contract performance continued to be unacceptable or unsatisfactory and milestones were delayed. However, none of the letters expressed any urgency or raised concerns about the missed milestone impact on fielding the system. The Air Force threatened to terminate the contract in 1988 and 1990, but did not follow through.

Acquisition Planning and Strategy

The Air Force may have averted the procurement problem had it done a better job of acquisition planning as required by the Federal Acquisition Regulation (FAR) and assessed the capabilities of the prime and subcontractor.

FAR Part 7, Acquisition Planning. Acquisition planning is defined as, "the process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost." According to FAR 7.1, acquisition planning requires the contracting agency, "to promote and provide for full and open competition, or in cases where full and open competition is not required, in accordance with part 6, to obtain competition to the maximum extent practicable." In addition, it states that, "acquisition planning should begin as soon as the agency need is identified, preferably well in advance of the fiscal year in which the contract award is necessary."

The Air Force did not comply with the FAR requirements. The responses to the 1984 "Sources Sought Synopsis" for a competitive procurement were not evaluated. Instead, while the synopsis was still open in September 1984, the Air Force decided that it would use the model 4C had already produced. By not analyzing the synopsis responses, the Air Force restricted market research and limited its opportunity to determine whether there were acceptable alternative sources or solutions. This market research would have permitted the Air Force to reassess whether to proceed with using 4C in some capacity or pursue other alternatives. Even when the Air Force decided to use 4C, there was still uncertainty as to which strategy to use, either directly with a sole-source procurement or by using the Section 8(a) program. In addition, the Air Force did not adequately evaluate the modifications to the existing 4C equipment that were required to make it work in the ICCE program or the 4C capabilities with regard to those modifications.

Also, the Air Force did not plan for the procurement well in advance of the award. Contracting personnel stated that as late as December 1984, the contracting process did not begin because the acquisition package was incomplete. When the Air Force finally decided on a course of action, there was insufficient time to fully evaluate the contractor's and subcontractor's capability to perform because a contract had to be in place to meet the IOC date.

Updates to the FAR. The Business Opportunity Development Reform Act of 1988 (the Act) was enacted, 3 years after the contract was awarded, to improve the growth and development of small businesses. The Act led to changes in the

FAR to require that contracts awarded under the Section 8(a) program be awarded on the basis of competition if the contract, including options, would exceed \$5 million, in the case of a contract opportunity assigned a standard industrial code for manufacturing, and \$3 million including options, in the case of all other contract opportunities. This contract would have met the criteria for competition had the law been in place.

Acquisition Strategy. The Air Force changed its acquisition strategy 5 times in 10 months prior to awarding the contract to Techdyn Systems. Because of the inflexible decision that 4C had to provide the PDFA and the resulting strategy changes, the Air Force did not decide to use Techdyn Systems until 2 months before award. A contract had to be awarded quickly because the Air Force required an IOC operational date by September 1985. Awarding the contract quickly limited the Air Force ability to adequately assess both Techdyn Systems and the 4C capability to perform the work. Both companies performed poorly during the contract. The fact that 4C did not perform adequately on the contract indicated that the decision to use the same form, fit, and function did not reflect good acquisition planning.

Planned Cost and Delays

By not adequately planning this procurement, the Air Force paid an extra \$6 million for a product that was not complete and was more than 7 years late. The total fixed priced contract for the initial effort and remaining work was \$12,123,091 and the period of performance was supposed to be completed by February, 1987. However, the amount paid as of January 2000 was \$18,154,719 and the last deliverable was approved by the Air Force in 1993. Had the Air Force fully evaluated the capabilities of the contractors or fully evaluated competing the contract to allow consideration of new designers, the Air Force may have procured a better system in a timely manner.

Other Performance Issues

Techdyn Systems had not performed adequately on other DoD contracts. In August and September 1998, the Air Force terminated three other contracts with Techdyn Systems for default. The contracts were for operations and maintenance of telecommunications equipment.

Appendix A. Audit Process

Scope and Methodology

Work Performed. We audited Air Force contract F19628-85-C-0079 for installation of radios and antennae. We analyzed the contract and modifications, legal documents, and correspondence between the Air Force, prime contractor, and subcontractor. The documents covered the period from 1984 to 1999. We interviewed Air Force officials at Hanscom Air Force Base in Boston, Massachusetts, and interviewed officials for the prime contractor, Techdyn Systems located in Virginia.

Limitations to Scope. Because our objectives were limited to those requested from Congress, we did not include a review of the management control program.

DoD-Wide Corporate Level Government Performance and Results Act Coverage. In response to the Government Performance and Results Act Goals, the Secretary of Defense annually establishes DoD-wide corporate level goals, subordinate performance goals and performance measures. This report pertains to achievement of the following goal, but there is no applicable performance measure.

FY 2000 Corporate Level Goal 2: Prepare now for an uncertain future by pursuing a focused modernization effort that maintains U.S. qualitative superiority in key warfighting capabilities. Transform the force by exploiting the Revolution in Military Affairs, and reengineer the Department to achieve a 21st century infrastructure. Meet combat forces' needs smarter and faster, with products and services that work better and cost less, by improving the efficiency of DoD's acquisition processes.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the Department of Defense. This report provides coverage of the Defense Contract Management high-risk area.

Computer Processed Data. We did not rely on computer based data.

Audit Type, Dates, and Standards. We performed this economy and efficiency audit from October 1999 through January 2000 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD.

Contacts During the Audit. We visited individuals at Hanscom Air Force Base, Boston, Massachusetts; and Techdyn Systems Corporation, Alexandria, Virginia. Further details are available upon request.

Appendix B. Report Distribution

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House Subcommittee on Government Management, Information, and Technology,
Committee on Government Reform
House Subcommittee on National Security, Veterans Affairs, and International
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